ACCESSION NR: AT4038815

cm/min; 9-mm washer to simulate "intermediate speeds of level variation" at 1.4 cm/min). The results of laboratory tests using this type of set-up are described in the article. Orig. art. has: 4 figures, 3 formulas and 5 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya, Leningrad. (Scientific Research Institute of Hydrometeorological Instrument Building)

SUBMITTED: 00 DATE ACQ: 12Jun64 ENCL: 00

SUB CODE: ES NO REF SOV: 004 OTHER: 000

Card 3/3

[redacted]

[redacted]VICH, I.M.; KLEMAN, L.S.

The miniature shore marigraph (M-28). Trudy N[redacted] no.12:18-28 '64.
(MIRA 18:4)

KLEBANER, V.Ya.

Several problems of patternmaking specialization. Trudy LIP no.227:48-54 '63. (MIRA 17:4)

VELIKANOV, K.M.; KLEBANER, V.Ya.

Method for calculating the economic efficiency of substituting castings with rolled billets. Trudy LIP no.227:97-112 '63.
(MIRA 17:4)

KLEBANER, Vladimir Yakovlevich; CHERNIKOV, Vladimir Sergeyevich; LIPNITSKIY, A.M., red.; ALAMYSHEVA, N.A., red.izd-va; GVIRTS, V.L., tekhn. red.

[Mechanizing the wooden patternmaking processes; practices of the Neva Machinery Manufacturing Plant] Mekhanizatsiia derevomodel'nogo proizvodstva; opyt Nevskogo mashinostroitel'nogo zavoda im. V.I.Lenina. Leningrad, 1963. 13 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Liteinoe proizvodstvo, no.3)
(MIRA 17:1)

KLEBANER, V.Ya.

Classification of foundry-mould sets as the basis for the organization of specialized production. Trudy LPI no.244: 34-43 '65. (MIRA 18:5)

DARDIK, F.G.; KOSTINA, K.A.; KLEBANOV, A.Ya.

Suppression of an outbreak of infectious hepatitis in rural districts. Zdrav.Kazakh. 17 no.6:31-35 '57. (MIRA 12:6)

1. Iz Kazakhskoy respublikanskoy sanepidstantsii i Yukhno-Kazakhstanskoy oblastnoy sanepidstantsii.
(SOUTH-KAZAKHSTAN PROVINCE--HEPATITIS, INFECTIOUS)

KLEBANOV, A.Ya., inzh.

Supports for vertical apparatus of the chemical industry. Prom. stroi. 42 no.1:20-21 '65. (MIRA 18:3)

1. Tsentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut promyshlennykh zdaniy i sooruzheniy.

PHASE I BOOK EXPLOITATION

241

Spravochnik na metalloizdeliya promyshlennogo naznacheniya. Sostavlen po Gosudarstvennym standartam i tekhnicheskim usloviyam (Handbook of Metal Products for Industrial Uses. Compiled According to State Standards and Technical Specifications) Moscow, Metallurgizdat, 1957. 594 p. 13,500 copies printed.

Compilers: Belen'kiy, Yakov Grigor'yevich; Gorzhevskiy, Grigoriy Yakovlevich; Klebanov, Bentsion Davidovich; Ed.: Kadykov, N. I.; Ed. of Publishing House: Valov, N. A.; Tech. Ed.: Attopovich, M. K.

PURPOSE: The handbook is designed for engineering and technical personnel of all branches of industry and also for service personnel of supply and marketing organizations.

COVERAGE: The handbook provides specification data on metal products: steel wire rope, nails, bolts, rivets, screws, etc. Chemical composition, mechanical and other properties of

Card 1/28

Handbook of Metal Products for Industrial Uses. (Cont.)

the products are given and the regulations relative to supply of metal products under the current standards are presented. The book also gives brief recommendations for consumers, tables of theoretical weights and dimensions, nomenclature of metal products handled by Glavmetallosbyt (Main Administration for the Marketing of Ferrous Metals) and a list of this organization's offices, metal-supply bases and metal products warehouses. Information is given on shapes, dimensions, and brands of steel approved as of October 1, 1956 as conforming to the state standards and technical specifications. Approved shapes and dimensions not yet in production are entered in parentheses. There are no references.

Card 2/20

KLEBANOV, B.M.

Derivatives of nicotinic acid as hypocholesterinemic agents.
Vrach. delo no.1:91-93 Ja'64 (MIRA 17:3)

1. Kafedra farmakologii (zav. - deystvitel'nyy chlen AMN SSSR, prof. A.I.Cherkes) Kiyevskogo meditsinskogo instituta.

ZHUKOVSKIY, L.I.; KLEBANOV, B.M.

Side effects of convallatoxin. Vrach.delo no.10:120-121 O '60.
(MIRA 13:11)

1. Terapevticheskoye otdeleniye (zav. - L.I.Zhukovskiy) Vasil'kovskoy rayonnoy bol'nitsy Kiyevskoy oblasti.
(CONVALLATOXIN)

KLEBANOV, B. S.

USSR/Electronics - Combined Systems Carrier Telephony Jul 52

"Long-Distance High-Frequency Telephone Communications Along Electric Power Transmission Lines," Cand Tech Sci I. K. Bobrovskaya, Ya. L. Bykhovskiy and K. P. Yegorov and Engrs B. S. Klebanov, V. I. Medvedev, and N. K. Myakochina

"Elektrichestvo" No 7, pp 41-46

Gives basic data for apparatus EPO-1 (single-sideband, 84 one-way channels) designed for hf telephony along power transmission lines. Work was begun in 1945 by Central Sci Res Elec Eng Lab, and prototypes were developed, with participation of this lab, by plant of Min of Commun Equip Ind in conjunction with Chair of Long-Distance Commun of Elec Eng Inst of Commun imeni Bonch-Bruyevich. Experimental samples of EPO-1 have been placed in continuous operation. Submitted 19 Oct 51.

PA 237T41

KLEBANOV, Boris Vladimirovich, insh.; KUZ'MIN, Vladimir Grigor'yevich, insh.; OKHKHOV, Pavel Aleksandrovich, insh.; PROSHIN, Georgiy Aleksandrovich, kand.tekhn.nauk; LEONOV, I.S., insh.retsenzent; SOROKIN, A.A., insh.retsenzent; SERDYUK, V.K., insh., glav.red. MAYEVSKIY, V.V., insh. red.; GORNOSTAYPOL'SKAYA, S.M., tekhn. red.

[Repairing motor vehicles and tractors] Remont avtomobilei i traktorov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Pt.1. 1961. 335 p.

(MIRA 14:5)

(Motor vehicles—Maintenance and repair) (Tractors—Maintenance and repair)

KLEBANOV, D.K., insh.

Using waterproof reinforced concrete in underground structures for heat networks. Energetik 8 no.5:16-17 My '60.
(MIRA 13:8)
(Leningrad--Reinforced concrete construction)
(Heating from central stations)

KLEBANOV, I.L. (Leningrad)

New developments in central heating in Leningrad. Energetik 13 no.5:6-7 My '65. (MIRA 18:8)

1. Starshiy inzh. otdela kapital'nogo stroitel'stva Leningradskogo rayonnogo upravleniya energeticheskogo khozyaystva.

KLEBANOV, Boris Vladimirovich, inzh.; KUZ'MIN, Vladimir Grigor'yevich, inzh.; MASLOV, Vladimir Ivanovich, inzh.; LEONOV, I.S., inzh., retsenzent; SOROKIN, A.A., inzh., retsenzent; PILIPENKO, Yu.P., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Repair of motor vehicles and tractors]Remont avtomobilei i traktorov. Pod red. B.V.Klebanova. Moskva, Mashgiz. Pt.2. 1962. 301 p. (MIRA 16:2)

(Motor vehicles--Maintenance and repair)
(Tractors--Maintenance and repair)

BLANKOV, B.I.; KLEBANOV, D.L.

Some criteria for incestigating the process of lyophilization of biological materials. Trudy IEMG no.7:5-19'60.
(MIRA 16:8)

(LYOPHILIZATION)

BLANKOV, B.I.; KLEBANOV, D.L.

Evalutaion of apparatus for the lyophilization method of "unequal loading". Trudy IEMG no.7:20-27'60. (MIRA 16:8)
(LYOPHILIZATION) (BIOLOGICAL APPARATUS AND SUPPLIES)

BLANKOV, B.I.; KLEBANOV, D.L.

Laboratory apparatus of the sorption type for lyophile drying of biological materials. Lab. delo 6 no.5:47-49 S-O '60.
(MIRA 13:9)

1. Moskovskiy nauchno-issledovatel'skiy institut epidemiologii, mikrobiologii i gigiyeny (dir. S.I. Didenko).
(BIOLOGICAL PRODUCTS—DRYING)

BLANKOV, Boris Izrailevich; KLEBANOV, David L'vovich; PARNES, Ya.A., red.; ROMANOVA, Z.A., tekhn. red.

[Use of lyophilization in microbiology] Primenenie liofilizatsii v mikrobiologii. Moskva, Medgiz, 1961. 262 p. (MIRA 14:12)
(FREEZE-DRYING) (MICROBIOLOGY—TECHNIQUE)

KLEBANOV, F.G.; BYCHKOV, V.I.

Reaction of the peritoneum to talc. Khirurgiia 37 no.2:115-118 F '61. (MIRA 14:1)

1. Iz Moskovskoy gorodskoy bol'nitsy No.56 (glavnyy vrach A.A. Kolomeytseva).
(PERITONEUM--DISEASES) (TALC)

KLEBANOV, P.S.

Control of gas emanations in depleted areas. Ugol' 32 no.10:31-34 O '57. (MIRA 10:11)

(Mine gases)

PA - 3039

AUTHOR: KLEBANOV, F.S.

TITLE: On Air Flow in Workings where there is Goaf. (O dvizheniye vozdukha, po gornym vyrabotkam pri nalichii vyrabotannykh prostranstv, Russian)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 4, pp 766-768 (U.S.S.R.)

Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: The present work describes a method for the general qualitative estimation of the air flow along the worked out parts in a mine. This method is well suited for calculation of the quantity of air flowing off through this working. Such analyses and computations are necessary for the projecting of ventilation in mines.
First, the equation for the air motion in such a working is given. This equation is, in general, not integratable, but with some additional assumptions and simplifications mathematical difficulties are removed, but thereby the physical problem is changed and a qualitatively correct solution is no longer obtained. The solutions suggested in various previous works are not general enough. In a limited interval (e.g. $0 < x < 300$ m) it is possible to obtain an approximated solution of such an equation by means of such a method in which, instead of continuously distributed outflows of air, the air is considered as a concentrated ("fictitious") flow. This flow branches off at a certain point from the ventilation jet. With this method there are no restrictions with respect to the exponent n in the law of air resist-

Card 1/2

124-58-9-9738D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 37 (USSR)

AUTHOR: Klebanov, F. S.

TITLE: The Influence of Worked-out Areas on the Aerodynamic and Gasdynamic Processes Occurring in Mine Shafts (Vliyaniye vyrabotannykh prostranstv na aerogazodinamicheskiye rezhimy shakht)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the In-t gorn. dela AN SSSR (Institute for Mining, Academy of Sciences, USSR), 1958

ASSOCIATION: In-t gorn. dela AN SSSR (Institute for Mining, Academy of Sciences, USSR), Moscow

1. Fluid flow--Analysis 2. Gas flow--Analysis 3. Mining industry --USSR

Card 1/1

YAGEL'SKIY, A.N.; KLEBANOV, F.S., otv.red.; RATNIKOVA, A.P., red.izd-va; BEKKER, O.G., tekhn.red.

[Thermal calculations of ventilation air for workings with dead-end face in deep coal mines] Teplovye raschety ventilatsionnogo vozdukha vyrabotok s tupikovym zaboem v glubokikh ugol'nykh shakhtakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 143 p. (MIRA 13:11)

(Mine ventilation)

LIDIN, Georgiy Dmitriyevich, nauchnyy sotr.; AYRUNI, Arsen Tigranovich, nauchnyy sotr.; KLEBANOV, Feliks Semenovich, nauchnyy sotr.; MATVIYENKO, Nikolay Grigor'yevich, nauchnyy sotr.; GREDIN, V.Ye., otv. red.; SMIRENSKIY, M.M., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Controlling accumulations of methane in coal mines] Bor'ba so skopleniiami metana v ugol'nykh shakhtakh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 140 p. (MIRA 15:1)

1. Institut gornogo dela im. A.A.Skochinskogo (for Lidin, Ayruni, Klebanov, Matviyenko).

(Mine gases)

BUKHMAN, Yakov Zakharovich; BAKIROV, Urkhan Khakimzhanovich; LUGOVSKIY, S.I., doktor tekhn. nauk, prof., retsenzent; KLEBANOV, F.S., otv. red.; GRISHAYENKO, M.I., red. izd-va; GALANOVA, V.V., tekhn. red.

[Local ventilation in metal mines] Mestnoe provetrivanie na metallicheskikh rudnikakh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 198 p. (MIRA 15:3)
(Mine ventilation)

KREMENCHUTSKIY, Nikolay Feofanovich; BURCHAKOV, A.S., kand. tekhn. nauk, retsenzent; OREKHOV, V.S., kand. tekhn. nauk retsenzent; KLEBANOV, F.S., kand. tekhn. nauk; otv. red.; ZAKHAROV, M.I., red. izd-va; SABITOV, A., tekhn. red.; KONDRAT'YEVA, M.A., tekhn. red.

[Ventilation of coal mines] Provetrivanie ugol'nykh shakht. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 239 p. (MIRA 15:1)

(Mine ventilation)

KLEBANOV, F.S., kand.tekhn.nauk; ROSSOCHINSKIY, V.I., gornyy inzh.

Effect of pulp motion in the troughs on the flow of ventilation air in the workings. Ugol' 36 no.5:33-35 My '61. (MIRA 14:5)
(Hydraulic mining) (Mine ventilation)

LUGOVSKIY, Sergey Ivanovich; DUGANOV, G.V.; BARATOV, E.I.; BAKIROV, U..Kh.; CHERNOUS, A.P.; KLEBANOV, F.S., otv. red.; SMIRENSKIY, M.M., red.izd-va; SHKLYAR, S.Ya., tekhn. red.

[Ventilating deep mines]Provetrivanie glubokikh rudnikov. Moskva, Gosgortekhizdat, 1962. 322 p. (MIRA 15:11)
(Mine ventilation)

KLEBANOV, F.S.

Ventilation of a dead-end face with an operating hydraulic giant. Gor. i ekon. vop. razrab. ugol'. i rud. mest. no.1:177-181 '62. (MIRA 16:7)

(Hydraulic mining) (Mine ventilation)

KLEBANOV, F.S.

Reducing the concentration of explosion gases in a dead-end face with an operating hydraulic giant. Gor. i ekon. vop. razrab. ugol'. i rud. mest. no.1:274-280 '62. (MIRA 16:7)
(Hydraulic mining) (Blasting)

KLEBANOV, F.S., kand.tekhn.nauk

Ventilation of dead-end faces in hydraulic mines after blasting.
Nauch. soob. IGD 17:140-145 '62. (MIRA 16:7)
(Mine ventilation)

KLEBANOV, F.S., kand.tekhn.nauk

Ventilating the working faces of hydraulic mine development workings where methane has been liberated. Shakht. stroi. 6 no.5:7-9 My '62. (MIRA 15:7)

1. Institut gornogo dela imeni A.A. Skochinskogo.
(Mine ventilation)

KLEBANOV, F.S., kand. tekhn. nauk; ROSSOCHINSKIY, V.I., inzh.; MYASNIKOV, A.A., kand. tekhn.nauk; BARATOV, E.I., kand. tekhn.nauk; MALASHENKO, Z.N., inzh.; KOREPANOV, K.A., kand. tekhn. nauk; SKLYAROV, A.A., kand. tekhn. nauk; SYROYEZHKIN, P.V., inzh.; KUKHARSKIY, M.P., inzh.; VORONINA, L.D., otv. red.; BERKGAUT, V.G., red.izd-va; DOROKHINA, I.N., tekhn. red.

[Improving mine ventilation methods in hydraulic mining] Sovershenstvovanie sposobov proveterivaniia vyrabotok gidroshakht. [By] F.S.Klebanov i dr. Moskva, Izd-vo AN SSSR, 1963. 156 p. (MIRA 16:10)
(Mine ventilation) (Hydraulic mining)

KLEBANOV, F.S. (Moskva)

Transitional gas conditions in coal mines during sharp changes of aerodynamic parameters (case n = 1). Izv. AN SSSR. Otd. tekh. nauk. Met. i gor. delo no.4:169-174 Jl-Ag '63. (MIRA 16:10)

KLEBANOV, F.S., kand. tekhn. nauk; AYRUNI, A.T., kand. tekhn. nauk

Dependence of the methane abundance of a section on the quantity of air supply. Ugol' 38 no.1:39-43 Ja '63. (MIRA 18:3)

1. Institut gornogo dela im. A.A. Skochinskogo.

BAGRINOVSKIY, Aleksey Dmitriyevich, kand. tekhn. nauk; [illegible], Feliks Semenovich, kand. tekhn. nauk; VOLKOVA, L.I., kand. tekhn. nauk, otv. red.

[Theoretical problems of the automation of coal mine ventilation] Teoreticheskie voprosy avtomatizatsii provetrivaniia ugol'nykh shakht. Moskva, Nauka, 1965. 62 p. (MIRA 18:9)

KLEBANOV, G.; PILETSKIY, M.

Plenum of the Central Committee of the White Russian Red Cross.
Zdrav. Belor. 5 no.2:68-69 F '59. (MIRA 12:7)
(WHITE RUSSIA—RED CROSS)

KLIMANOV, G.

Republic conference of pharmaceutical workers. Zdrav.Belor. 5 no.8:74-75 Ag '59. (MIRA 12:10)
(WHITE RUSSIA--DRUGSTORES)

KLEBANOV, G.; PILETSKIY, M.

Plenum of the Central Committee of the White Russian Red Cross. Zdrav. Belor. 5 no.2:68-69 F '59. (MIRA 12:7)
(WHITE RUSSIA--RED CROSS)

KAMYSHNIKOV, S.; KLEBANOV, G.; PILETSKIY, M.

Second Conference of Therapeutists of the White Russian S.S.R.
Zdrav.Belor. 5 no.1:62-68 Ja '60. (MIRA 13:5)
(WHITE RUSSIA--THERAPEUTICS)

KLEBANOV, G.

Problems in public health at a meeting of the city council of workers' deputies. Zdrav. Belor. 6 no. 5:68-69 My '60. (MIRA 13:10)
(ORSHA--PUBLIC HEALTH)

KLEBANOV, O.; KAMYSHNIKOV, S.

Republic conference of workers in the public health service of the White Russian S.S.R. Zdrav. Belor. 6 no.6:17-26 Je '60. (MIRA 13:8)
(WHITE RUSSIA--PUBLIC HEALTH)
(WHITE RUSSIA--MEDICAL PERSONNEL)

KAMYSHNIKOV, S.; KLEBANOV, G.; PILETSKIY, M.

Eighth Congress of the White Russian Red Cross Society. Zdrav. Bel. 7 no.5:64-67 My '61. (MIRA 14:6)
(WHITE RUSSIA--RED CROSS--CONGRESSES)

KLEBANOV, G.; PILENSKIY, M.

Republican conference-seminar on medical expert testimony. Zdrav. Bel. 7 no.6:73-76 Je '61. (MIRA 15:2)
(MEDICAL JURISPRUDENCE--CONGRESSES)

KIEBANOV, G.

Eighth Republic Conference of the Medical Workers Trade Union.
Zdrav. Bel. 8 no.4:60-62 Ap '62. (MIRA 15:6)
(MEDICINE—CONGRESSES)

MOGILEVCHIK, Z.K.; GABRILOVICH, M.A.; ARINCHIN, N.I.; DMITRIYEV, A.; KANTOR, D.; KLEGANOV, G.; PILETSKIY, M.

Congresses, conferences, meetings. Zdrav. Bel. 8 no.6:68 Je '62. (MIRA 16:8)

(NO SUBJECT HEADINGS)

KLEBANOV, G.

Fourth Plenum of the Central Committee of the Red Cross Society of the White Russian S.S.R. Zdrav. Bel. 9 no.1:85-86 Ja '63.
(MIRA 17:5)

KLEBANOV, G.; PILETSKIY, M.

Republic Conference of the Trade Union of Medical Personnel.
Zdrav. Bel. 9 no.8:89-91 Ag'63 (MIRA 17:3)

KLEBANOV, G.B., inzh.; KHAZANSKIY, S.A., inzh.

T-108 crawler tractor for industrial purposes. Trakt. i sel'khozmash. 31 no.11:4-5 N '61. (MIRA 14:12)

1. Chelyabinskiy traktornyy zavod.
(Crawler tractors)

MIN'KO, Leonid Iosifovich; CHILOKYBOVA, T.Ye., zasluzhennyy deyatel' nauk UkrSSR, prof., nauchnyy red.; KLEBANOV, G.E., red.; ZIMA, Ye.G., tekhn. red.

[Popular medicine and the harm of quackery] Narodnaia meditsina i vred znakharstva. Minsk, 1962. 40 p. (Obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii Belorusskoi SSR, no. 19) (MIRA 16:6)
(MEDICINE, POPULAR) (QUACKS AND QUACKERY)

MATVIYENKO, Bronislava Stepanovna; KLEBANOV, Georgiy Grigor'yevich; DUBAVIK, P., red.; DOMOVSKAYA, O., tekhn. red.

[In step with life] V nogu s zhizn'iu. Minsk, Gos.izd-vo BSSR. Red. massovo-polit.lit-ry, 1961. 17 p. (MIRA 15:1)
(Collective farms)

KLEBANOV, G. I.

KARLIN, M. I., KLEBANOV, G. I.

Penicillin combined with autoblood in treatment of pyoderma. Vest. vener. No. 4, July-Aug. 50. p. 35-6

1. Of Leningrad No. 3 Skin-Venereological Dispensary (Head Physician--Ye. A. Shaydin).

CLML 19, 5, Nov., 1950

DOBRYNIN, I.F.; KLEBANOV, G.M., inzhener, nauchnyy redaktor; UDOD, V.Ya., redaktor; TOKER, A.M., tekhnicheskiy redaktor.

[Advanced work methods for electric welders in construction work] Peredovye metody raboty elektrosvarshchikov-stroitelei. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1954. 26 p. (Electric welding) (MLRA 7:12)

GUSHCHINA, L.S. (Moskva); KLEBANOV, G.N. (Moskva); SHORSHOROV, M.Kh. (Moskva).

Changes in the structure and mechanical properties of low-alloy steel near the seam line caused by fusion welding. Izv.AN SSSR Otd.tekh. nauk no.8:131-134 Ag '56. (MLRA 9:9)

1.Institut metallurgii imeni A.A. Baykova AN SSSR.
(Steel alloys--Welding)

Submitted : No date

Klebanov, G. N.

137-58-3-5170

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 100 (USSR)

AUTHORS: Shorshorov, M. Kh., Klebanov, G. N.

TITLE: Methods and Apparatus Employed for Investigation of Changes Occurring in Structure and Mechanical Properties of the Heat-affected Zone in the Course of the Thermal Cycle of Welding (Metod i apparatura dlya issledovaniya izmeneniy struktury i mekhanicheskikh svoystv zony termicheskogo vliyaniya v usloviyakh termicheskogo tsikla svarki)

PERIODICAL: Tr. In-ta metallurgii, AN SSSR, 1957, Nr 1, pp 199-210

ABSTRACT: A report on methods and equipment developed for the purposes of studying the structural and mechanical property changes occurring in the parent metal in the thermal cycle (TC) of welding. Thin, rod-like specimens are heated by the passage of an electric current, and are then cooled in accordance with the given TC of welding. The heating of the specimens is controlled by varying the current according to a given schedule, while the cooling is accomplished by gas blowing, spraying with water, or with the aid of passing low-amperage currents through the specimen. In studies of the kinetics

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137-58-3-5170

Methods and Apparatus Employed for (cont.)

of phase transformations or of grain growth, the specimen (3x5 mm^2 in cross section) is sharply quenched in water at specific points in the TC. After polishing and subsequent etching the specimen is subjected to metallographic analysis, in the course of which the phase composition and the grain size are determined. Temperature changes occurring in the central section of the specimen during heating or cooling are measured by means of a thermocouple and recorded on an oscillograph tape. In studies of the changes in mechanical properties occurring during the TC, 3x5x150mm^3 specimen, with 5-mm-radius cut-outs on both sides, is secured in the jaws of a tensile strength testing machine; after being heated according to a given TC, the specimen is quickly brought up to fracture at specified time points. Curves showing the changes in stress and elongation of the specimen as functions of time are recorded on the oscillograph by means of a TL-20 type induction transducer and a resistance transducer. A 40 kva transformer supplies the heat energy for the experimental installation. For purposes of regulation of the heating current passing through the specimen, a fluid rheostat with a metal blade having a suitably specified shape is connected in series with the transformer primary. The blade of the rheostat is shaped in accordance with the law governing the current variation in the specimen; the current is computed numerically for the given TC of welding by utilizing

Card 2/3

Methods and Apparatus Employed for (cont.)

the differential equation for the caloric balance of the heating of a conductor due to the passage of a current. A tensile strength testing machine, employing an electromagnetic system powered by a 60-v direct current, is capable of exerting forces up to 1200 kg, and can produce high deformation speeds in the metal. Thus it is possible to accomplish fracture of the specimen within 0.05 seconds or less, i. e., under conditions in which the temperature of the TC of welding varies very slightly, even at high heating and cooling rates. This method will permit the determination of σ_b and σ_s of the metal of the specimen under conditions of high-speed elongation. σ_b and σ_s are determined directly from the graphs, while ψ is computed from measurements of the neck taken in the central portion of the cut-out in the specimen before and after elongation. A 6 mm cut-out with a uniform temperature distribution is taken as the basis of the computation of δ. By way of an illustration the authors show the changes in the mechanical properties of 35KhGSA steel, which occur near the seam during the TC of a single-pass butt welding of 35mm thick sheets at an energy input of 20,000 cal/cm.

G.K.

Card 3/3

KLEBANOV, G.N.

AUTHOR: Klebanov, G.N., Engineer 135-12-16/17

TITLE: Welding Conference and Exhibition in Essen (Federal German Republic) (Konferentsiya i vystavka po svarke v Essene, FRG)

PERIODICAL: Svarochnoye Proizvodstvo, 1957, # 12, p 45-46 (USSR)

ABSTRACT: The conference concerned was the 60th-anniversary conference of the German Welders Union with the simultaneous congress of the International Welding Institute, 25 June through 6 July 1957 in Essen. The Soviet guests were the following 12 specialists from the USSR and the Ukrainian Academies of Sciences, scientific research institutes and industry: N.N. Rykalin, B.Ye. Paton, K.V. Lyubavskiy, A.N. Shashkov, N.Ya. Kochanovskiy, I.D. Kulagin, L.M. Yarovinskiy, B.D. Orlov, A.A. Grigor'yev, F.V. Arifmetchikov, G.N. Klebanov and N.A. Chuvakov. About 1.000 delegates from more than 20 countries participated. The author calls the exhibition the largest ever seen in the history of welding and describes briefly some of the equipment seen as well as the German plants visited after the conference, the German welding methods and the organization of special education.

AVAILABLE: Library of Congress

Card 1/1

KLEBANOV, G.N., Cand Tech Sci--(diss) "Change in the structure and mechanical properties of low-alloy steel in the [redacted] seam zone under conditions of the thermal cycle of welding." Mos, 1958. 13 pp (Acad Sci USSR. Inst of Metallurgy im A. A. Baykov), 110 copies. Printed on rotoprint. (KL,[illegible]-58,113)

KLEBANOV, G.N.

AUTHOR: Klebanov, G.N., Engineer

135-58-5-2/17

TITLE: Effect of the Thermal Welding-Cycle on the Mechanical Properties of Low-Alloy Steel in the Zone Adjacent to the Weld (Vliyaniye termicheskogo tsikla svarki na mekhanicheskiye svoystva nizkolegirovannoy stali v okoloshovnoy zone)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 5, pp 5-8 (USSR)

ABSTRACT: The bead-sample (valikovaya proba) [Ref. 1] is one of the most common methods of evaluating the weldeability of steel by the changes of structure and mechanical properties in the metal adjacent to the weld. This method, however, requires much work and a considerable quantity of metal which is not always available when new steel grades are being developed. The Welding Laboratory of the Metallurgic Institute imeni Baykov, developed in 1955, the "IMet-1" method for such evaluation [Ref. 2]. Thin bar specimens are subjected to thermic cycles analogous to the bead-sample method cycles. This article presents some results of "IMet-1" tests on "adjacent" zone properties and structures of steel grades "40 Kh", "20 KhGS", "25 KhGSA", "25KhGFA", "23 G", "25 N 3" and "12KhN2". The effect of the cooling rate was determined.

Card 1/2

135-58-5-2/17

Effect of the Thermal Welding-Cycle on the Mechanical Properties of Low-Alloy Steel in the Zone Adjacent to the Weld

Technologic recommendations are given.
There are 4 diagrams, 3 tables, 13 photographs and 5 Soviet references.

ASSOCIATION: Institut metallurgii imeni A.A. Baykova AN SSSR (Metallurgic Institute imeni A.A. Baykov AS USSR)

AVAILABLE: Library of Congress

Card 2/2

85472

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S/135/60/000/012/009/010
A006/A001

AUTHORS: Silin, L.L., Nikolayev, A.V., Engineers, Klebanov, G.N., Candidate of Technical Sciences, Kuznetsov, V.A., Engineer

TITLE: New Welding and Cutting Methods

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 12, pp. 34-37

TEXT: New welding and cutting methods exhibited in a show include ultrasonic welding, plasma processing, welding with an electron beam in a vacuum, cold pressure welding and diffusion welding in a vacuum. The authors report on a series of new machines for the aforementioned purposes. The UZSM-1 ultrasonic apparatus is intended for spot welding of small-size thin alloy parts or their connection with plates. The unit consists of a welding head, a device producing the static force, a time relay and an electric control system. A ПМС-15 (PMS-15) type magnetostriction transformer is used to excite ultrasonic mechanical oscillations in the welding head. The static force is developed by a pneumatic diaphragm device. The force is controlled by modifying the air pressure on the diaphragm with a pressure regulator equipped with a control manometer. The air supply to the diaphragm and its outlet are achieved by an electromagnetic-driven

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New Welding and Cutting Methods

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A006/A001

pneumatic distributor. The apparatus can be operated individually or automatically. Oscillations may be switched-off after each spot. Spot welding of cermet contacts with bronze bridges was demonstrated on the described machine using a special device (Figure 1). The ultrasonic УЗСМ-2 (UZSM-2) apparatus for seam welding of metal was exhibited together with a technological device for welding annular diaphragms and membranes of 50-110 mm in diameter. On the seam welding device a magnetostriction transformer rotates together with a welding roller and a massive supporting roller. The rollers are connected by a transmission gear. The static force is produced by means of a foot lever. The ultrasonic portable УЗСА-3 (UZSA-3) machine is intended for one-sided welding of thin sheet parts to structures with large plane or shaped surfaces excluding the use of stationary machines. The apparatus consists of a welding head, a vacuum device and an electrical control system, and its design provides for a transmission without considerable losses of electric power from a generator at a distance of up to 50 m. This is one of the advantages of the ultrasonic welding method. The УЗТШ-1 (UZTSh-1) ultrasonic welding machine can be used for spot or seam welding by exchanging the acoustic unit. The contact force is produced by pneumatic drive. In all the described devices the oscillations are transmitted by pressing the part to the lateral surface in the antinode of the longitudinally oscillating

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instrument. In the ultrasonic assembly-welding table of the МО 20.019 (I020.019) type, the oscillations are transmitted to the work from a vertical rod fixed perpendicularly to the longitudinally oscillating link of the magnetostriction transformer. This machine is used for spot welding of parts, one of which must be not over 0.1 mm thick. Ultrasonic welding of plastics is made on the УЗП -1 (UZP-1) and the ПУТ -5а (PUT-5a) machines which can be used for spot and pitch-seam welding of 0.5-10 mm thick thermo-plastics and polymers. Welding with a plasma jet of low-carbon, low-alloy and high-alloy steels and alloys was demonstrated with the use of a head fixed to a ГС -17МУ (GS-17MU) welding machine (Figure 6). Argon is used as an operating and carbon dioxide as a shielding gas. The plasma jet and the arc are concurrent. Filler wire, introduced into the plasma jet is used to fill the gap. The current varies within 50-450 amp. A plasma jet is also used in building-up and cutting of metals. Welding with an electron beam is coming into industrial use. This process can be performed on the ЭЛУ -1 (ELU-1) unit (Figure 7) intended for welding straight seams up to 1,000 mm long and annular seams at a speed of 2-50 m/hr. The machine consists of the following basic parts: a vacuum chamber, an electron gun, a mechanism displacing the work to be welded, a vacuum system, a feed source and a control unit. The electron-beam gun ensures a 1.5 kw maximum power of the beam at a

New Welding and Cutting Methods

maximum acceleration voltage as high as 22 kv. The diameter of the beam can be varied within 0.6 - 4 mm by an electrostatic and magnetic focusing system. The gun can be vertically displaced by 45 mm and the beam can be deflected in the plane perpendicularly to its direction, by 10 mm. A three-phase voltage rectifier is used as a feed source (380/22000 v). The limit vacuum in the chamber attains $5 \cdot 10^{-5}$ mm Hg. The vacuum system consists of a forevacuum pump and a vacuum unit of 4,500 l/sec capacity. Friction welding is performed on the MCT -34 (MST-34) machine designed by VNIIESO for friction butt-welding of cylindrical rods, 15-30 mm in diameter. A 15 kw motor drive is used, the rotation speed of the spindle is regulated within 500-1,000 rpm. The parts to be welded are clamped with the use of chucks. Efficiency is up to 150 welds per hour. Cold pressure welding equipment includes the MCXC -35 (MSKhS-35) (Figure 8) and the MCXC -5 (MSKhS-5) machines. The former is used for butt welding copper (up to 150 mm^2 section) and aluminum conductors up to 300 mm^2 section. Hydraulic pressure is used and the maximum force is 35 tons. The MSKhS-5 machine is intended for welding aluminum and copper conductors of 2-20 mm^2 section. Pneumatic drive is used and the upsetting force is 5 tons. The efficiency of the machine is 60 welds per hour. The CHC -2 (SNS-2) table stand is used for welding 5 - 25 mm^2 section

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New Welding and Cutting Methods

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aluminum conductors and 4 - 10 mm^2 section copper conductors; the КС-6 (KS-6) tongs are also intended for welding aluminum and copper conductors and the ПС-7 (PS-7) for welding aluminum and copper wire. A unit for diffusion welding in a vacuum (СВДУ-3 - SVDU-3) consists of a high-frequency tube generator operating within a range of 300 - 450 cycles, a vacuum chamber and a hydrocylinder. The required rarefaction is obtained using a diffusion pump. The parts are heated with a copper inductor made of a square tube with 1 mm thick walls. The heating temperature is controlled by a platinum-rhodium thermocouple. Twelve parts can be simultaneously welded in the chamber. The unit can be employed for welding cast-iron with steel, cermet plates to cutting tool holders, etc. Arc welding of pipes rotating in a magnetic field, welding in water vapor, and high-frequency welding of plastic films were also demonstrated.

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New Welding and Cutting Methods

Technical characteristics of machines for ultrasonic welding of metals and plastics

Characteristics	Type of Unit						
	UZSM-1	UZSM-2	UZSA-3	UZTSh-1	1020.019	UT-5a	UZP-1
Power of the magneto-striction ultrasonic transformer in kw	2,5-4,0	2,5-4,0	1,0	4,0	0,5	4,0	4,0
Operating frequency in k-cycles	19,5	19,5	22	20	14-19	20	20
Regulation limits of the contact force in kg	20-200	20-140	5-20	10-200	2-40	5-250	5-400
Limits of welding time regulation in sec	0,1-4,0	-	-	0,2-8	0,2-5,7	0,2-8,0	0,2-8,0
Welding speed	-	4,5-150 m/hr	-	4,5-145 m/hr	-	up to 100 spots/min	6-30 spots/min

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New Welding and Cutting Methods

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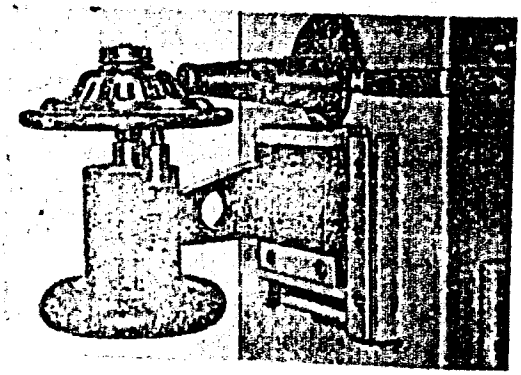

Figure 1.

Ultrasonic welding-on of cermet contacts

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Figure 6.

The TS-17MU welding tractor converted to welding with a plasma jet

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A006/A001

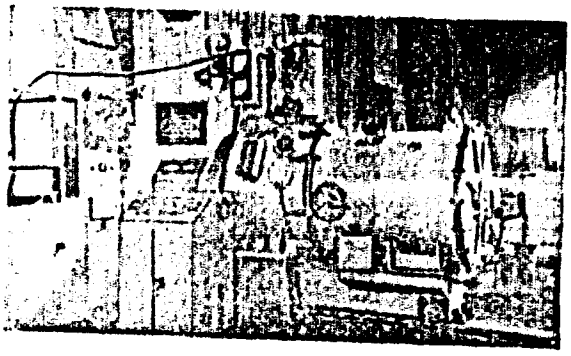

Figure 7.

The ELU-1 unit for welding with an electron beam in a vacuum

There are 9 figures.

Card 8/8

NIKONOV, A.G.; KLEBANOV, O.N.

Measuring surface temperatures during sliding friction. Izv. vys. ucheb. zav.; chern. met. no.2:122-126 '61. (MIRA 14:11)

1. Institut metallurgii im. A.A.Baykova.
(Surfaces (Technology)--Testing)
(Car wheels--Testing)

30897
S/180/61/000/005/007/018
E202/E335

1.2300 1573

AUTHORS: Grevtsev, N.V. and Klebanov, G.N. (Moscow)

TITLE: Recrystallization of refractory metals encountered during welding and brazing

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no. 5, 1961, 62 - 69

TEXT: This project has been carried out at the Laboratoriya teorii svarochnykh protsessov Instituta metallurgii imeni A.A. Baykova (Laboratory of the Theory of Welding Processes of the Metallurgical Institute im. A.A. Baykov), under the direction of Corresponding Member of the AS USSR N.N. Rykalin.
The authors studied the processes of crystallization occurring during welding and brazing Mo, W, Ta and Nb and the subsequent effect on the structure and mechanical properties of these metals in the weld-adjacent zone. Particular attention was paid to the rate of heating of the work in the various types of welding and brazing and its effect on the recrystallization temperature and the relations between the time during which the metal was exposed to a temperature in excess of the recrystallization temperature

Card 1/5

Recrystallization of ....

and the growth of the grain, i.e. the coalescing recrystallization. The influence of the rate of heating on the recrystallization temperature was studied on samples with varying cross-section along their length, which were heated electrically at various rates. The rate of heating of the cross-section at a distance of 5 or 10 mm from the central portion of the sample with minimum cross-section was varied from 40 to 2 200 deg/sec. These rates of heating embraced all the conditions encountered in the various types of welding and brazing. In the case of welding, heat-propagation is within 2 000 - 2 500 deg/sec for a metal thickness of 1.0 - 1.5 mm; in the case of brazing it is of the order of hundreds of degrees per second. The samples were studied metallographically; the region where recrystallization has started was determined by observing in the texture of the rolled sample the appearance of the first equiaxial grain. Knowing the temperature distribution and the rates of heating along the sample, it was possible to determine the velocity of heating in the zone and the maximum temperature at which the recrystallization started at a given rate of heating. In the case of niobium, microhardness (VPN) tests were carried out

Card 2/ 5

Recrystallization of ....

additionally and the samples were also used for determining the effect of duration of the exposure to temperature above the recrystallization temperature on the size of the grain and the effect of the grain size on the hardness. The samples were heated in an argon-filled, hermetically-sealed chamber and they were protected during the mechanical tests by a stream of argon. The temperature in the middle part of the sample was measured with the W/Re thermocouples and at the extremities with Pt/Pt-Rh thermocouples. The junctions were inserted into small holes and welded-in by means of a condenser discharge. The tests showed that with fast heating rates, i.e. under welding conditions, the temperature at which recrystallization starts increases by 250 and 400 °C, respectively and tends to a limit value. In the case of tantalum and niobium, these temperature increases are 120 - 150 °C and 170 - 200 °C, respectively. Under fast heating a considerable growth of the Mo grain was observed above 1 600 °C; the coalescing recrystallization was most intensive on increasing the temperature to which the sample was heated and even a slightly prolonged exposure to temperatures above the recrystallization temperature

Recrystallization of ....

produced a visible growth of the grain. Hence, shortening of this heating time is of value only in the case of welding where the base metal is heated to the vicinity of its melting point. In the case of brazing, where the working temperatures are below 1 600 °C, the duration of the process has little or no effect on the grain growth in the base metal. If the brazing temperatures are in excess of 1 600 °C it is advisable to use a HF induction heating. The authors conclude that the grain growth of tantalum and niobium is influenced, firstly, by the temperature to which the sample is heated and, secondly, by the duration of the exposure to temperatures above the recrystallization temperature during heating and cooling. Hence, it is recommended that welding of these metals should be carried out either with very heavy currents and high welding speeds, or by means of highly concentrated heating and deep penetration, e.g. by means of an electron beam. On the basis of their experiments the authors constructed a diagram for Nb with isotherm plots relating the grain size to the rate of heating and the working temperature (Fig. 6). The parameters chosen cover the usual

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ABSTRACT

The Second All-Union Conference on Rhenium, sponsored by the Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR, and the State Institute of Rare Metals, was held in Moscow 19-21 November 1962. A total of 335 representatives from 83 scientific institutions and industrial establishments participated. Among the reports presented were the following: autoclave extraction of Re from Cu concentrates (A. P. Zelikman and A. A. Peredereyev); Re extraction from the gaseous phase (V. P. Savrayev and N. L. Peysakhov); recovery of Re by sorption and ion interchange (V. I. Bibikova, V. V. Il'ichenko, K. B. Lebedev, G. Sh. Tyurekhodzhayeva, V. V. Yermilov, Ye. S. Raimbekov, and M. I. Filimonov); production of carbonyl Re (A. A. Ginzburg); electrolytic production of high-purity Re and electroplating with Re (Z. M. Sominskaya and A. A. Nikitina); Re coatings on refractory metals produced by thermal dissociation of Re chlorides (A. N. Zelikman and N. V. Baryshnikov); plastic deformation and thermomechanical treatment of Re (V. I. Karavaytsev and Yu. A. Sokolov); growth of Re single crystals and effect of O_2 on their properties (Ye. M. Savitskiy and G. Ye. Chuprikov); Re-Mo, Re-W, and Re-precious-metal alloys (Ye. M. Savitskiy, M. A. Tylkina, and K. B. Povarova); synthesis of Re nitrides, silicides, phosphides, and selenides (G. V. Samsonov, V. A. Obolonchik, and V. S. Neshpor); weldability of Re-Mo and Re-W alloys (V. V. D'yachenko, B. P. Morozov, and G. N. Klebanov); new fields of application for Re and Re alloys (M. A. Tylkina and Ye. M. Savitskiy); and Re-Mo alloy for thermocouples (S. K. Danishevskiy, Yu. A. Kocherzhinskiy, and G. B. Lapp). [WW]

Tsvetnyye metally, no. 4, Apr 1963, pp 92-93

L 29926-66 EWP(k)/EWT(m)/T/EWP(w)/EWP(v)/EWP(t)/ETI IJP(c) JD/HM/JG
ACC NR: AP6017991 (A) SOURCE CODE: UR/0413/66/000/010/0092/0092

53
B

INVENTOR: Klebanov, O. N.; Chernyshova, T. A.

ORG: none

TITLE: Method of determining the resistance of welds to hot crack formation. Class 42, No. 181060 [announced by the Institute of Metallurgy im. A. A. Baykov (Institut metallurgii)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 92

TOPIC TAGS: niobium, niobium alloy, alloy welding, weld, weld cracking, hot cracking, cracking susceptibility, susceptibility evaluation

ABSTRACT: This Author Certificate introduces a method of evaluating weld susceptibility to hot cracking by depositing a bead on the tested metal plate and recording the bead length to the first crack. For quantitative evaluation of the susceptibility to hot cracking in welded thin niobium alloy sheets, a narrow notch is cut in the sheet specimen and the bead is deposited over the root of the notch, perpendicular to the latter. The maximum length of the bead between the notch and the first crack serves as a basis for evaluating weld susceptibility to hot cracking. [ND]

SUB CODE: 13, 11/ SUBM DATE: 17Mar65/ ATD PRESS: 5011

Card 1/1

UDC: 620.179.2

L 00[illegible]-67 EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k) LJP(c) JD/JH/JG/GD

ACC NR: AT6034449 (N) SOURCE CODE: UR/0000/66/000/000/0135/0139

AUTHOR: Klebanov, G. N.; Chernysheva, T. A. 32 B+1

ORG: none 21 18

TITLE: Test for evaluating the susceptibility of niobium-alloy welds to hot cracking

SOURCE: AN SSSR. Institut metallurgii. Svoystva i primeneniye zharoprochnykh splavov (Properties and application of heat resistant alloys). Moscow, Izd-vo Nauka, 1966, 135-139

TOPIC TAGS: niobium alloy, ~~niobium alloy~~ metal welding, ~~niobium alloy~~ weld, weld hot cracking, hot cracking susceptibility, weld heat treatment

ABSTRACT: A new testing method for evaluating the susceptibility of niobium-alloy welds to hot cracking has been proposed. The test specimens are made of niobium-alloy sheets 1 mm thick and 50 or 80 mm wide with a narrow slit cut in them (see Fig. 1). A weld bead is deposited on the specimen in such a way that the center line of the weld goes through the end of the slit. The rate of deformation is determined by measuring the speed at which the slit opens. The deformation rate increases with increasing length of the weld between the starting point and the slit and with increasing welding speed. The criterion of weld

Card 1/2

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ACC NR: AT6034449

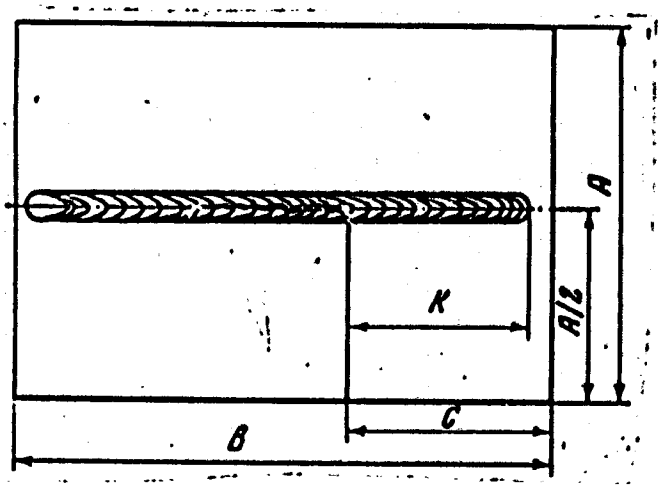


Fig. 1. Test specimen for evaluating the susceptibility of niobium-alloy welds to hot cracking.

resistance to hot cracking is the maximum length of the weld at which cracking does not occur. The test has been successfully applied to a series of niobium alloys. Orig. art. has: 4 figures.

SUB CODE: 11, 13/ SUBM DATE: 10Jun66/ ATD PRESS: 5103

Card 2/2 1a

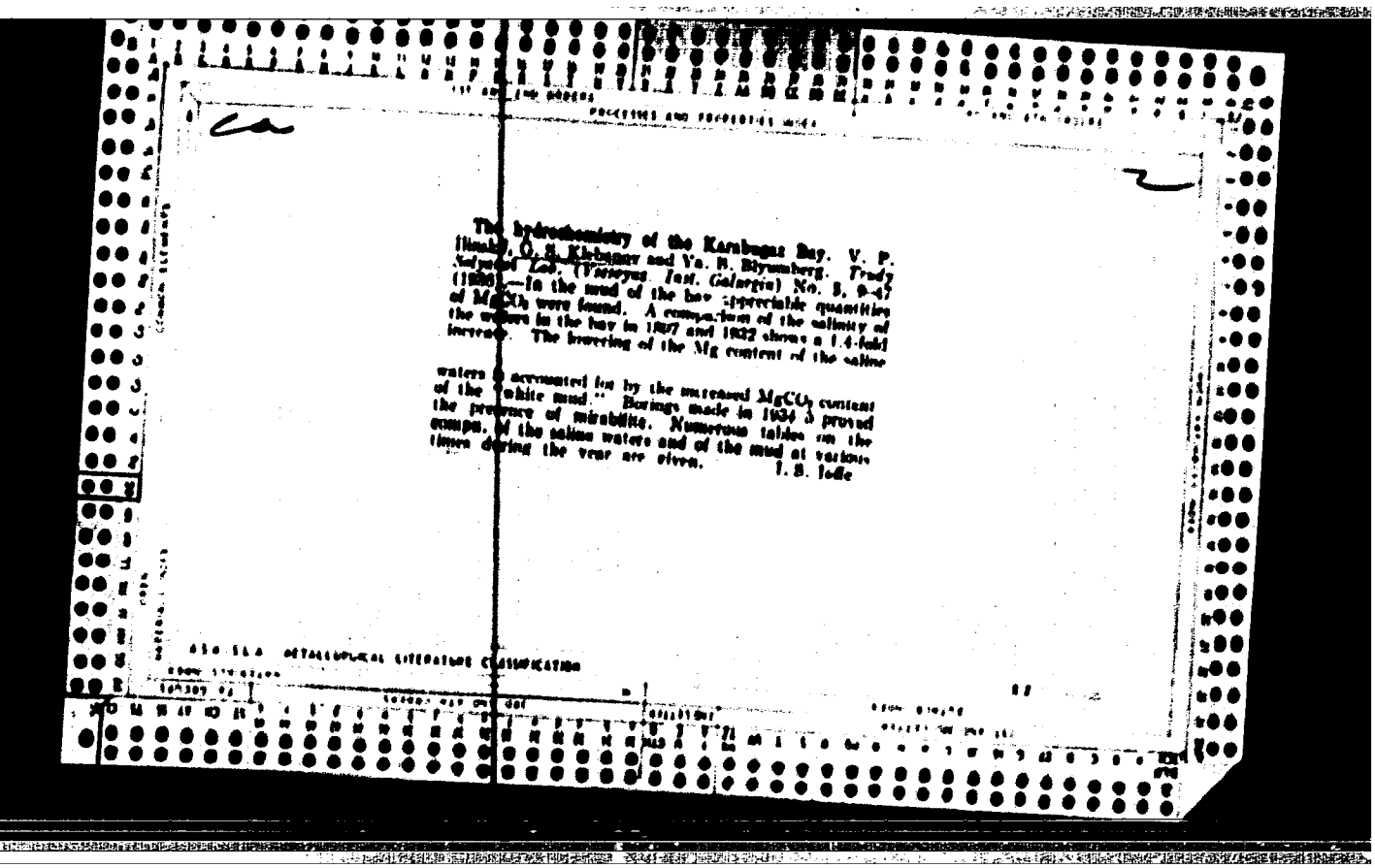
PROCESSES AND PROPERTIES INDEX

Co

18

Polythermic phase of crystallization of Glauber's salt from the solutions of sodium chloride and magnesium sulfate. V. P. Il'inskii and O. S. Klebanov. *Trans. State Inst. Applied Chem., Sci. Tech. Dept. U. S. S. R.* No. 308, 46-[illegible](1939); cf. Il'inskii and [illegible], *J. Russ. Phys.-Chem. Soc.* 61, 1968-74(1929).—Com. production of Na_2SO_4 from NaCl and $MgSO_4$ brine as obtained at the salt works of Crimean saline lakes is described. The deposit, formed in summer on concn. of the mixed brine for production of $MgCl_2$, is dissolved in the same reservoir by admission of sea water; the soln. on cooling to 0° in winter seps. about 20% of Na_2SO_4 (based on the wt. of brine), which is collected after the mother liquor is drawn off. This is an improvement over methods based on crystn. of 0.5-1% of Na_2SO_4 (of the wt. of brine) and dependent on propitious weather and temps. of −6-7°. Chas. Blanc

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION



The hydrochemistry of the Karabugaz Bay. V. P. Ilinskii, O. S. Klebanov and Ya. B. Blyumberg. *Trudy Sektora Lab. Vsesoyuz. Inst. Galurgii* No. 3, 9-47 (1936).—In the mud of the bay appreciable quantities of $MgCO_3$ were found. A comparison of the salinity of the waters in the bay in 1927 and 1932 shows a 1.4-fold increase. The lowering of the Mg content of the saline waters is accounted for by the increased $MgCO_3$ content of the "white mud." Borings made in 1934 also proved the presence of mirabilite. Numerous tables on the compn. of the saline waters and of the mud at various times during the year are given.

I. S. Iodle

CA

11

The preparation of magnesium chloride flakes. G. S. Khrianov, Y. M. Bukshtein and I. O. Evert. *Tekh. Halurgii* 1938, No. 7, 24-31; *Khim. Referat. Zhur.* 2, No. 2, 88-9(1939).—In a lab. app., a boiler-iron cylinder of 0.5 sq. m. surface, cooled internally with water, revolves in a trough contg. fused $MgCl_2$. The crust of $MgCl_2$ is removed from the cylinder by a scraper. The optimum conditions for the prepn. of $MgCl_2$ flakes were: temp. of the melt in the trough 160-140°, velocity of cylinder 14 revolutions/min. The output was 0.3 ton/hr./1 sq. m. of cylinder surface and thickness of the flakes up to 1 mm.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

BC

9-1

Solubility in the systems $NaBr-NaBrO_3-H_2O-NaHCO_3$ and $-Na_2CO_3$. G. S. Klebanov and K. P. Basova (J. Appl. Chem. Russ., 1939, 12, 1601—1609).—Phase diagrams are given for the systems $NaBr-NaBrO_3-NaHCO_3-H_2O$ at 25° and 35°, and $NaBr-NaBrO_3-Na_2CO_3-H_2O$ at 80°. NaBr greatly depresses the solubility of all the other salts, whilst $NaBrO_3$ depresses only that of $NaHCO_3$. When solutions containing NaBr and $NaBrO_3$ are evaporated until crystallisation commences, and the temp. is lowered to >10°, $NaBrO_3$ separates in 80% yield. Recovery of further $NaBrO_3$ from the mother-liquors is not possible; pure NaBr is obtained by reducing $NaBrO_3$ to NaBr. $NaHCO_3$ separates out together with NaBr or $NaBrO_3$; this may be prevented by converting it into more sol. Na_2CO_3, by heating the solutions, and then returning the liquor for bromination, or by adding bromides the cation of which combines with CO_3'' to form insol. carbonates.

R. T.

METALLURGICAL LITERATURE CLASSIFICATION

POZIN, Maks Yefimovich; KLEBANOV, G.S., redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor

[Technology of mineral fertilizers and salts] Tekhnologiia mineral'nykh udobrenii i solei. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 352 p. (MLRA 10:3)
(Fertilizers and manures) (Salts)

KLEBANOV, G.S.; OSTAPKEVICH, N.A.

Solubility of sodium and potassium sulfites and sodium thiosulfate in water - alcohol solutions. Zhur. neorg. khim. 5 no.10:2329-2332 O '60. (MIRA 13:10)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Sodium sulfite) (Potassium sulfite)
(Sodium thiosulfate)

S/080/60/033/009/004/021
A003/A001

AUTHORS: Klebanov, G.S., Ostankevich, N.A.

TITLE: The Interaction of Selenium With Aqueous Solutions of Sulfites of Alkali Metals

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 9, pp. 1957-1961

TEXT: The solubility of selenium in solutions of sodium and potassium sulfite was studied within the temperature range of 0-152°C. It was established that the solubility of selenium is characterized by the coefficients

$$K_1 = \frac{Se}{SO_3^{2-}} \quad \text{and} \quad K_2 = \frac{SeSO_3^{2-}}{SO_3^{2-}},$$

which are directly proportional to the concentration of SO_3^{2-} at constant temperature. At a pH value above 7.3-7.5 the solubility of selenium increases, at lower pH values it decreases due to side reactions taking place. At a given pH value and constant temperature the solubility of selenium depends only on the SO_3^{2-} concentration. In the case of intensive mixing of the reaction mass above 200 rpm of the stirrer and a temperature of 90°C equilibrium is attained in the

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The Interaction of Selenium With Aqueous Solutions of Sulfites of Alkali Metals

solution after 30 min. Under equal initial conditions (concentrations of the sulfites, pH value, intensity of stirring, size of selenium crystals) the equilibrium in the solution is attained at 90°C 25 times faster than at 20°C. There are 5 figures, 1 table and 5 references: 4 Soviet, 1 German.

SUBMITTED: March 17, 1960

Card 2/2

POZIN, Maks Yefimovich. Prinimali uchastiye: ARSEN'YEVA, L Z.; KAGANOVICH, Yu.Ya.; KLEBANOV, G.S.; KLEVKE, V.A.; KOPYLEV, B.A.; SOKOLOVSKIY, A.A.; MAKOVETSKIY, L.A., red.; GRIVA, Z.I., red.; ERLIKH, Ye.Ya., tekhn. red.

[Technology of mineral salts; fertilizers, pesticides, industrial salts, oxides and acids] Tekhnologiia mineral'nykh solei; udobreniia, pestitsidov, promyshlennykh solei, okislov i kislot. 2., izd. perer. i dop. pri uchastii: L.Z.Arsen'evoi i dr. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1961. 1008 p. (MIRA 14:10)
(Fertilizers and manures) (Salts)

KLEBANOV, G.S.; NAYDIS, F.B.; PAKHOMOVA, N.V.

Extraction of bromine from waste products of synthomycin production. Med. prom. 16 no.1:28-34 Ja '62. (MIRA 15:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(BROMINE)
(CHLOROMYCETIN)

KLEBANOV, G.S.; OSTAPKEVICH, N.A.

Production of potassium and sodium selenosulfates. Zhur.prikl.khim. 35 no.1:186-188 Ja '62. (MIRA 15:1)
(Sodium selenosulfate) (Potassium selenosulfate)

S/080/62/035/006/003/013
D204/D307

AUTHORS: Klebanov, G. S. and Ostankevich, N. A.

TITLE: The preparation of cadmium selenide

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 6, 1962, 1199-1206

TEXT: CdSe was prepared by the gradual addition of aq. $CdSO_4$ or $CdCl_2$ to a calculated amount of aq. Na_2SeSO_3, by the reaction which was proved to be $Cd^{2+} + SeSO_3^{=} + H_2O \longrightarrow CdSe + 2H^+ + SO_4^{=}$. The precipitate was washed with water, dried at 110 - 120°C and analyzed. With a molar ratio (n) of Se to $SO_3^{=}$ (in the selenosulphate) equal to 0.42, the yield of CdSe increased from 36.1% at 0°C to 90.8% at 150°C. Below 60°C the main products were CdSe, $CdSO_3$ and ~0.2% of free Se. At 60 - 150°C up to 1.9% CdS was also found. The proportion of $CdSO_3$ decreased with rising temperature.

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The preparation of ...

Formation of Se is ascribed to a side reaction: $SeSO_3^= + 2H^3 \rightarrow Se + SO_2 + H_2O$. Cadmium sulphite was readily removed with 0.5 N/HCl and Se with hot IM Na_2SO_3. Separation of CdSe and CdS was very difficult. The optimum value of n at 96°C was 0.57, whilst the concentration of Na_2SO_3 from which the Na_2SeSO_3 was prepared, the Cd^{2+}:Se ratio and the time of holding the product at 96°C had practically no effect on the yields of CdSe. The addition of Cd^{2+} to the Na_2SeSO_3 should be completed in 0.5 - 1 hour. Acidity of the medium in dependence on the amount of Cd^{2+} added and the effects of Na_2CO_3 additions on the yield and composition of CdSe were also investigated. Conclusions: (1) To obtain >99.9% pure CdSe in ~48% yield n should be 0.42 and the temperature of reaction <60°C. $CdSO_3$ is removed with hot 0.5N HCl or 20% NH_4OH, followed by washing with hot 1M Na_2SO_3 to dissolve Se. (2) For 96 - 97% yields of

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D204/D307

The preparation of ...

CdSe containing 0.5% CdS, the reaction should be carried out at 96 - 100°C, with n = 0.71 - 0.72, adding Na_2CO_3 to neutralize the acid formed. The product is then washed with warm 0.5N HCl to remove $CdCO_3$. There are 1 figure and 9 tables.

SUBMITTED: July 3, 1961

Card 3/3

S/080/62/035/007/003/013
D267/D307

AUTHORS: Klebanov, G.S. and Ostapkevich, N.A.

TITLE: The reaction between selenium and aqueous solutions of salts of heavy metals

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 7, 1962, 1465-1467

TEXT: At high temperatures, sulphur reacts with water according to the equation: $3S + 3H_2O \rightleftharpoons 2H_2S + H_2SO_3$. No SeO_3^{2-} and Se^{2-} ions could be detected iodometrically when an aqueous suspension of Se ($Se:H_2O$ = 1:200) was kept at 98°C for 12 hours, pH being varied between 3 and 7. No precipitates of selenides were observed when salts of Zn, Cd, Pb and Cu(II) were added. On the contrary, insoluble selenides and SeO_3^{2-} ions were obtained upon addition of salts of Ag, Cu(II) and Hg(II). Thus the equilibrium of the reaction $3Se + 3H_2O \rightleftharpoons 2H_2Se + H_2SeO_3$ is strongly shifted to the left; the reaction involved can be utilized to obtain selenides of metals, whose solubility is less than 10^{-25} g-mole/l. It

Card 1/2

S/080/62/035/007/003/013
D267/D307

The reaction between ...

is c:: edient to add substances which reduce the selenious acid form: . There are 5 figures.

SUBMITTED: May 11, 1961

Card 2/2

KHALETSKIY, A.M.; KLEBANOV, G.S., red.;

[Pharmaceutical chemistry; inorganic compounds] Farmatsevticheskaia khimiia: neorganicheskie soedineniia; uchebnoe posobie dlia studentov-zaochnikov. Leningrad, Leningradskii khimiko-farmatsevticheskii institut, 1963. 126 p. (MIRA 16:12)

(CHEMISTRY, MEDICAL AND PHARMACEUTICAL)

KLEBANOV, G.S.; MOROZOVA, A.V.

Solubility of iodine in sulfuric acid solutions. Zhur.prikl.khim. 37 no.1:207-209 Ja '64. (MIRA 17:2)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

KLEBANOV, G.S.; PINCHUK, G.Ya.

Solubility in the systems KI - NaI - H_2O, KI - HI - H_2O, NaI - HI - H_2O, MgI_2 - HI - H_2O. Zhur. prikl. khim. 37 no.2:289-293 F '64. (MIRA 17:9)

1. Leningradskiy khimiko-farmatsevticheskiy institut.